

ABSTRACT OF THE DISCLOSURE

A method for embedding digital watermark data in digital data contents includes the steps of obtaining a frequency coefficient of block data of digital data contents, obtaining a complexity of the block data, obtaining an amount of transformation of the frequency coefficient from the complexity and the digital watermark data, and embedding the digital watermark data by transforming the frequency coefficient. In addition, a method for reading digital watermark data includes the steps of calculating a probability of reading '1' or '0' in a read bit sequence by using a test method on the basis of binary distribution, determining the presence or absence of digital watermark data according to the probability, and reconstituting digital watermark data. Another method includes the steps of performing soft decision in code theory by assigning weights to the digital watermark sequence with a weighting function, and reconstituting digital watermark data.